TDS – A TMDL Stressor / Pollutant

Increases in Major Anions & Cations Adversely Impact Aquatic Life

- The toxicity testing literature indicates that significant changes in the concentrations of cations and anions resulting in an ionic imbalance can be both acutely and chronically toxic to aquatic life, in the absence of any other toxicant.

TDS as Stressor

- TDS or specific conductivity identified as stressor in 6 EPA approved and SWCB adopted TMDLs
- No promulgated numeric criteria for TDS
- Use reference watershed approach to determine and set TDS end point
- Have included development of TDS numeric criteria for consideration in current triennial review

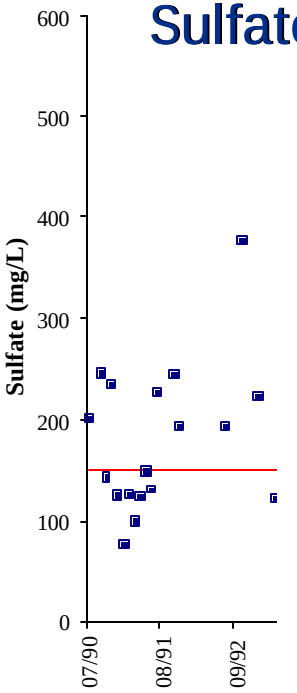
TDS Criteria

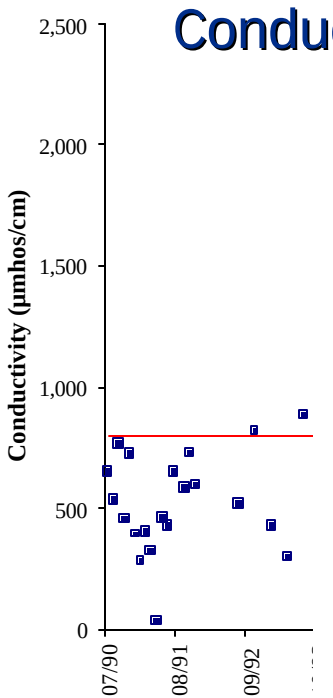
- TDS criteria being reviewed by members of Academic Advisory Committee and EPA
  - reviewing various options for criteria development
    - by watershed, ecoregion, or combination
- Empirical approach appears to be most practical

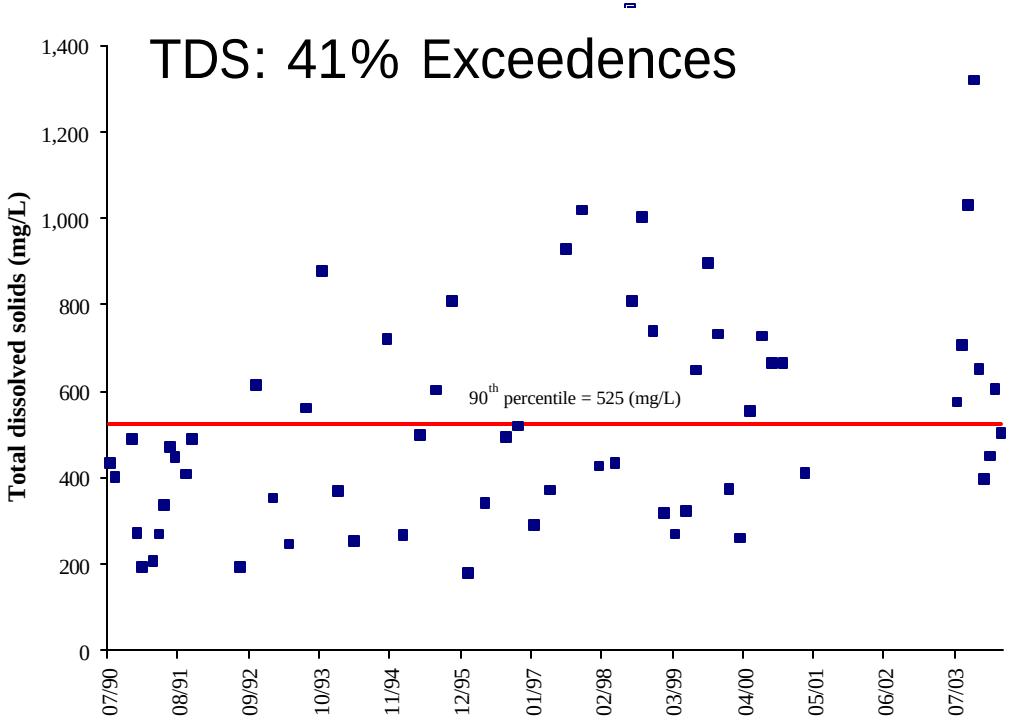
TMDL Empirical Approach
Pollutants w/o Numeric Criteria

- Compare in-stream wq data to the 90th percentile measured of non-impaired watershed (reference watershed)
- If in-stream data exceeds the 90th percentile more than 10% of the time a potential stressor is indicated

Example of Impaired & Non-impaired watershed







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